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IS 2852 (1998): Carpenter's augers [PGD 6: Earth, Metal And Wood Working Hand Tools]



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भारतीय मानक  
बढ़ई का औगर — विशिष्टि  
( पहला पुनरीक्षण )

*Indian Standard*  
CARPENTERS' AUGERS — SPECIFICATION  
( *First Revision* )

ICS 25.100.30

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**BUREAU OF INDIAN STANDARDS**  
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG  
NEW DELHI 110002

**FOREWORD**

**This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Woodworking Hand Tools Sectional Committee had been approved by the Production Engineering Division Council.**

**This Indian Standard was first issued in 1976. This revision has been taken up to bring it in line with the current practices followed in the industry.**

**This standard is one of a series of Indian Standards for woodworking and carpenter's tools.**

**The sizes of the handles have also been specified and it is recommended that the purchasers should clearly state in their enquiry and order whether the augers are to be supplied along with the handles.**

**For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed, or calculated, expressing the result of a test, shall be rounded off in accordance with IS 2:1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.**

## *Indian Standard*

# CARPENTERS' AUGERS — SPECIFICATION

*( First Revision )*

### 1 SCOPE

This standard specifies the dimensions and other requirements for carpenters' augers.

### 2 REFERENCES

The following standards contain provisions which through reference in this text, constitute provision of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below:

<i>IS No.</i>	<i>Title</i>
620 : 1985	Wooden tool handles general requirements ( <i>fourth revision</i> )
3748 : 1990	Tool and die steels — Specification
2102 (Part 1) : 1993	General tolerances: Part 1 Tolerances for linear and angular dimensions without individual tolerance indications ( <i>third revision</i> )
2500 (Part 1) : 1992	Sampling inspection procedures: Part 1 Attribute sampling plans indexed by acceptable quality level (AQL) for lot-by-lot inspection ( <i>second revision</i> )

### 3 SHAPE AND DIMENSIONS

**3.1** The general shape and dimensions of carpenters' augers shall be as given in Table 1.

**3.2** For untoleranced dimensions, the coarse class according to IS 2102 (Part 1) shall be followed.

### 4 MATERIAL

The augers with the exception of auger eyes shall be made from good quality carbon or alloy tool steel.

### 5 HARDNESS

The twist and the cutting edge of augers shall be hardened and tempered to produce a hardness reading within the range 450 to 520 HV ( $\approx$ 45 to 51 HRC) except that the hardness reading at the commencement of the twist adjacent to the shank shall be within the range 360 to 420 HV ( $\approx$ 35 to 42 HRC).

### 6 HANDLES

**6.1** The handles for augers shall form a separate item in the enquiry and order and shall not be supplied unless specifically ordered.

**6.2** When the handles are required to be supplied with augers, they shall conform to the shape and dimensions as given in Table 2 and the requirements from those of Class V as given in IS 620.

### 7 MANUFACTURE

The auger and the eye shall be manufactured separately. The shank of the auger shall be fitted with the eye of the auger so rigidly as to withstand the tests laid down in 10.

### 8 WORKMANSHIP AND FINISH

The augers shall be free from cracks, seams and other defects and shall be smoothly finished. The screw lead shall lie in the centre of the cutting edges which shall cut equally and simultaneously. The nose, the twist and the round shank shall be concentric with the axis of the tool. The working ends shall be ground ready for use.

### 9 SAMPLING

#### 9.1 Lot

In any consignment, all the augers of the same size manufactured from the same material under similar conditions of production shall be grouped together to constitute a lot.

**9.2** For ascertaining the conformity of the lot, the procedure for sampling and inspection as given in IS 2500 (Part 1) shall be followed. The type of sampling plan, inspection level and acceptable quality level (AQL) to be followed for various characteristics shall be as given in 9.2.1.

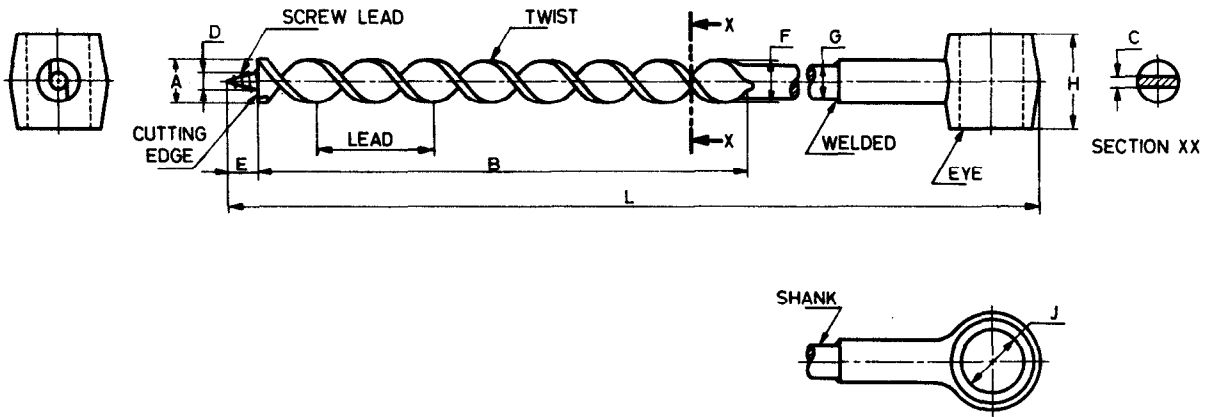
**9.2.1** For ascertaining the conformity for all the requirements, a single sampling plan with inspection level II and AQL of 1.5 percent as given in Table I and IIA of IS 2500 (Part 1) shall be followed.

### 10 TESTS

#### 10.1 Shock Test

The auger shall be raised to a height of 450 to 600 mm

**Table 1 Dimensions of Carpenters' Augers**  
( Clause 3.1 )



All dimensions in millimetres.

Nominal Size A [ + 1.0 0 ]	Length of Twist Excluding Screw Lead B	Sectional Thickness of Twist C	Lead of the Twist	Diameter of the Screw Lead D	Length of the Screw Lead E	Pitch of the Screw Lead Single Start	Out- side Dia- meter of Twist F	Dia- meter of Shank G (Max)	Width of Eye H	Bone Dia- meter of Eye J [ 0 - 1.0 ]	Overall Length L
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
6	135	2	20	3	6	2	5	6	24	16	525
10	145	3	25	4	8	2	9	8	24	16	530
12	150	3	35	5	9	2.5	11	10	28	19	575
14	150	3	35	5	9	3	13	10	28	19	600
16	160	3	40	5	11	3	15	10	32	22	600
18	160	4	40	5	11	3	17	11	32	22	600
20	160	4	40	5	11	3	19	11	32	22	600
22	175	4	50	5	11	3	20	12	32	22	600
25	185	5	55	6	12	3	22	13	33	25	600
27	185	5	55	6	12	3	24	14	35	27	625
33	190	6	65	8	16	3	30	15	40	27	650
39	200	6	75	8	16	3	35	16	40	27	650
45	210	7	100	11	19	3	40	17	44	27	700
50	225	7	100	11	19	3	45	19	51	30	700
60	235	8	125	12	22	2.5	55	19	56	35	750
66	250	9	125	12	22	2.5	60	20	56	35	750

above the upper face of a solid block and brought down quickly to cause the auger shank and auger eye joint to strike a sharp blow against the upper face of the block. The auger shall be given three such blows and shall show no sign of damage or distortion after the test.

**10.2 Twisting Test**

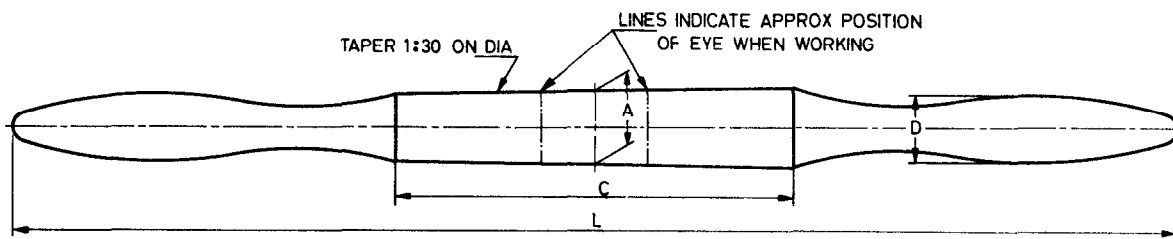
The shank of the auger shall be securely and positively gripped adjacent to the twist in a vice or other suitable fixture and a steel bar having a length equal to that of

the appropriate handle and a diameter 1.5 mm smaller than the bore of the auger eye shall be disposed centrally in the auger eye and used to subject the auger shank to the maximum torque that can be applied manually. The torque shall act normally about the axis of the auger and the angle through which the shank is twisted shall in no case exceed 30°. After the test the auger shall show no sign of damage, fracture or flaw.

**10.3 Performance Test**

The auger shall bore satisfactorily across the grain to

**Table 2 Dimensions of Auger Handles**  
( Clause 6.2 )



All dimensions in millimetres.

Nominal Size of Auger (see A, Table 1)	Bore Diameter of Eye of Auger (see J <sub>1</sub> , Table 1)	Nominal Size Diameter at Centre of Taper A	Overall Length L	Length of Tapered Centre C	Diameter of Grip D
(1)	(2)	(3)	(4)	(5)	(6)
6, 10	16	16	325	100	14
12, 14	19	19	325	105	17
16, 18, 20, 22	22	22	350	120	20
25	25	25	385	125	24
27, 33, 39, 45	27	27	400	135	25
50	30	30	500	175	30
60, 66	35	35	600	200	33

a minimum depth of 75 percent of the length of its twist, into a piece of sound sal or similar hardwood of suitable dimensions. The tool shall not be withdrawn during the test. When the bore reaches the depth given above, the auger shall withdraw easily. After the test the auger shall show no sign of damage, fracture or flaw.

## 11 DESIGNATION

11.1 The carpenters' augers shall be designated by nominal size and the number of this specification.

Example:

A carpenters' auger having nominal diameter  $A = 12$  mm shall be designated as:

Auger IS 2852 — 12

## 12 MARKING

12.1 Each auger shall be marked with the nominal diameter and the manufacturer's name, initials or trade-mark.

### 12.1.1 BIS Certification Marking

Each auger may also be marked with the Standard Mark.

12.1.1.1 The use of the Standard Mark is governed by the provision of *Bureau of Indian Standards Act, 1986* and the Rules and Regulations made thereunder. The details of conditions under which the licence for the use of Standard mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

## 13 PRESERVATIVE TREATMENT AND PACKING

13.1 The body of each auger shall be coated with suitable anti-corrosive paint and the ground portion shall be coated with anti-corrosive grease or varnish.

13.2 The augers shall be securely packed in suitable case of a size convenient for handling, or as specified by the purchaser.



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### Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

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